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QUARTERLY REPORT
JULY - SEPTEMBER, 1985

CHAPARE REGIONAL DEVELOPMENT PROJECT

EXPERIENCE, INCORPORATED

CONTRACT NUMBER	511-0543-C-00-4214
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QUARTERLY REPORT JULY - SEPTEMBER, 1985

C O N T E N T S

- I. ACTIVITIES
 - A. Administrative and Institutional
 - B. Technical
- II. ISSUES AND SOLUTIONS
- III. WORK PLANNED FOR NEXT QUARTER
- IV. RECOMMENDATIONS

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CHAPARE REGIONAL DEVELOPMENT PROJECT 511-0453

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I. ACTIVITIES

A. ADMINISTRATIVE AND INSTITUTIONAL

IBTA/Chapare personnel numbered 83 at the end of the third quarter, 1985. Problems in obtaining laborers persisted during the quarter, primarily due to the high nightly wage scales in the Chapare labor market.

Director General	1
Directors	2
Administrator	1
Administrative Assistants	4
Secretaries	3
Technicians	30
Chauffers	3
Tractor Drivers	2
Mechanics	2
Mechanics Assistants	2
Warehousemen	2
Cooks	4
Maids	1
Guards	3
Laborers	20
Cowboys	2
Nurseryman	1

El personnel took vacations as follows:

Joe Lopez	21 June	-	22 July
Patricia Violand	19 August	-	18 September
Gerald P. Owens	24 August	-	20 September

Miss Rosa Zagarra was employed on a temporary basis as Secretary/Computer Operator for EI on 15 August. Her appointment was made permanent as of 16 September.

During 1985, EI personnel spent an average of one third of their work-time in the Chapare. The percentages ranged from less than twenty percent in May, June and September (due to transportation problems and political instability) to over fifty percent in February, March and August.

EI personnel were involved in numerous meetings, briefings and workshops. Regular meetings were held with the U.S. Consul and heads of other US agencies. Mr. Jeffrey Biggs, Deputy Chief of Mission, visited Cochabamba July 26-27 and met with all EI personnel. Mr. George Wachtenheim, Deputy Director, USAID, was in Cochabamba in August. Ms Jane McGhee, Senate Foreign Appropriations Subcommittee advisor and Mr. Kelly Kramerer, USAID Senate Liaison Officer, visited Cochabamba and the Chapare in early August. Franklin Lastra and Joe Lopez made a presentation to a workshop in Cochabamba on "Problematicas de la Coca" in July. Experience, Incorporated personnel provided information and photographs for briefing the new ambassador, Mr. Edward Rowell.

Experience, Incorporated requested office furniture from USAID in July when it became apparent that IITA/Chapare would be unable to fill our requirements. USAID loaned five desks and a typing table to IITA/Chapare and EI in the interim.

IITA/Chapare received one microbus, two Broncos and two Ford vans from USAID during the current quarter.

Other equipment, material and supplies received from USAID or purchased by the project are as follows:

Electric typewriter	1
Manual typewriter	4
Tractor tires	4
Cement	50 bags
Plaster	60 bags
Roofing material - wood	
Roofing material - Duralit	
Ceramic tile	60 square meters
Bricks	7000
Weed Eaters - heavy duty	10

In addition to the above, IITA/Chapare received two heavy-duty two wheel garden tractors and one seed dryer from MACA; funded by donations from Korea and the BID/IITA COLOSUR convenio.

The following funds were received by, or expended on behalf of, IBTA/Chapare during the third quarter, 1985:

	SPECIAL ACCOUNT Bolivian Pesos -----	DIRECT ACCOUNT U.S. Dollars -----
July	36,674,872,000	
August		
Sept.	20,486,400,000	
	-----	-----
TOTAL	37,161,272,000	78,034.00

Experience, Incorporated received appliances (stoves, refrigerators, freezers, washers and dryers) and numerous household items. These items have been inventoried in a format suitable for computer files.

IBTA/Chapare rented a warehouse in August, which freed up a good deal of space in the Cochabamba office which had been used for storage. The warehouse is suitable for parking, repair and maintenance of a large number of vehicles as well as for storage of chemicals, fertilizer, seeds and other supplies.

IBTA/Chapare, with help from EI personnel, completed the second edition of the Plan Operativo in the current quarter.

Ing. Zannier appointed a scholarship committee to help program short and long-term training abroad. Members of the committee are Franklin Lastra, Jorge Aldunate, Alfredo Alvarado and Jose Mondonedo.

B. TECHNICAL

The Gardiner Training report "The IBTA/Chapare In-country Training Program - Assessment and Development of Plans and Material for Life of Project", was finalized and distributed. A local contract was made for translation into Spanish.

Leon Vallejos and Joe Lopez accompanied Carlos Alarcon and Enrique Jaldin of SPTB to several Unit Production Demonstration Sites in Microregions Two, Three and Five. The purpose of the trip was to evaluate progress and to plant cardamon in the nurseries.

Meetings of a technical nature were also held with the Ministry of Planning, Ministry of Agriculture, Servicio Nacional de Caminos, campesinos and campesino leaders, the Banco de Cochabamba, USAID, SDTB and other development agencies.

Drs. Bieber and Alvarado traveled to Pairumani in July to purchase seed. Dr. Alvarado traveled twice to Santa Cruz to establish contact with the University and the Experiment Station, and to procure seed and plant material. Joe Lopez stopped at New Mexico State University and in Costa Rica during his R and R leave to procure seeds and plant material for the project. Dr. Alvarado visited CUEAT and GEOBOL in La Paz in connection with the design of a project to provide fertilizer and soil amendments locally.

Repair and rehabilitation of experiment station buildings continued throughout the quarter.

A number of technical reports were prepared by EI personnel:

Aldunate, Jorge and Joe Lopez, "Representative Demonstration Farms in the IBTA/Chapare Extension Program".

Alvarado, Alfredo, "El Suelo Como Medio de Cultivos".

Alvarado, Alfredo, (Translator), "Principios de Investigacion y Extension Agricola".

Alvarado, Alfredo, "Manejo de Suelos Tropicales".

Bieber, John, "Minimum Lethal Doses of Pesticides."

Mondonedo, Jose, "Horticulture Crops in the Humid Tropics"

Mondonedo, Jose, "Propagation of Plants by Grafting".

Mondonedo, Jose, " Pruning of Fruit Crops".

The following is a list of introductions of new genetic material already growing and under observation on experiment stations in the Chapare, as of 30 September, 1955.

Vanilla

black pepper

macadamia

Cardamon

Ginger

Papaya

Mythrina (a shade crop for agroforestry component)

Gliricidia (a shade crop for agroforestry component)

Yuca
 Malanga
 Pigeon pea
 Cowpea
 Jalapeno
 Tomato
 Winged beans
 15 varieties of tropical corn
 20 varieties of phaseolus beans

Additional genetic material expected to arrive in the next few months includes:

Macadamia	Cocoyam
Ginger	Passion fruit
Peach palm	Chili pepper
Black pepper	Maranjilla
Vanilla	Agroforestry species
Sweet potato	Corn
Cowpea	Pigeon pea
Allspice	Soursop
	Mangosteen

Much of this material can be multiplied for distribution as it has been under observation previously.

ICTA/Chapare has the following seed and seedlings in production; for distribution to Chapare farmers:

	# Plants -----	When -----
Pineapple	15.000	March 86
Peach Palm	8.000	Nov. 85
Orange	10.000	May 86
Mandarin	3.000	May 86
Cacao	1.500	Dec. 85
Coffee	50.000	Jul. 86
Rice	6 Tons	March 86
Corn	6 Tons	March 86

The following table shows the status of the three ICTA/Chapare nurseries as of 30 September, 1985.

<u>NURSERY</u>	<u>STOCK</u>	<u># PLANTS</u>
VILLA TUNARI	Citrus, grafted	4,500
	Citrus to be grafted	3,000
	Peach Palm	6,000
	Pineapple suckers	2,000
LA JOTA	Citrus, grafted	2,000
	Citrus to be grafted	17,000
	Cacao	4,500
	Cardamon	15,000
	Pineapple	5,000
	Lacalaria	500*
	Black Pepper	300*
	Erythrina	300*
	Cliricidia	300*
	Malanga (Taro)	25*
	Yuca stakes	2,000
	Rice (Bluebonnet)	600 Kg **
	Corn, Opaque 2	1000 Kg **
	Black Beans, ICA-TUI	1000 Kg **
Vanilla	70*	

NOTE: * Not for distribution
 ** To be multiplied

In addition to the observation nurseries for new genetic material and commercial nurseries to provide seed and seedlings for Chapare farmers, IDTA/Chapare has assisted in the establishment of 13 community nurseries in two microregions.

<u>COMMUNITY</u>	<u>MICRO REGION</u>	<u>No. NURSERIES</u>	<u>CROPS</u>
Bolivar	2	1	Coffee
Huayruruni	2	1	Coffee
Paractito	2	2	Coffee, cardamon
Villa Bauer	2	1	Coffee

Jatum Pampa	2	1	Coffee
Itira Pampa	2	1	Coffee, cardamon
21 de Abril	3	1	Coffee, citrus, cacao
Puerto San Francisco	3		Coffee, citrus, cardamon
Tocopilla	3	1	Coffee, citrus
Gualberto Villarroel	3	1	Citrus
Bubuzama	3	1	Citrus, rubber, coffee
21 de Noviembre	3	1	Macadamia, citrus, coffee.

By end of current quarter, IBTA/Chapare had established 19 Unit Production Demonstration Modules (Demonstration farms). These modules have been established on farmers land or on land assigned by the community and vary in size from a few hundred square meters to one hectare.

These modules are in various stages of development. The IBTA/Chapare "Plan Operativo" provides more detail.

<u>MODULE NUMBER</u>	<u>COMMUNITY</u>	<u>MICRO REGION</u>
1	Puerto San Francisco	3
2	Puerto San Francisco	3
3	Puerto San Francisco	3
4	Puerto San Francisco	3
5	Bubuzama	5
6	Bubuzama	3
7	Bubuzama	5
8	Rio 24	5
9	Arroyo Seco (Villa Tunari)	2
10	Naranjito	2
11	Jatum Pampa	2
12	Hanco Kapac	8
13	23 de Agosto	5
14	Isiboro	4
15	Colonia Banzer	4
16	Chipiriri	4
17	Sinabota	7
18	Alto Paraiso	6
19	Samucabeti	4

ET personnel are involved in the following research projects:

Evaluation of different methods of topping crown stock on citrus grafts.

Influence of the age of suckers as planting materials on the production of bananas.

Trial plantings of vegetable crops.

Zinc application and liming in yuca.

Effects of zinc on fertilized yuca and beans.

Zinc application in citrus.

Cassava systems

Legume comparisons

Rhizobium inoculation effect on cowpeas and beans

Low labor plantings of beans

Cowpea variety trial

The first research results for this project were obtained during the current quarter.

Partial results were obtained from two research trials during the quarter - the Cassava System Trial and the Bean-Cowpeas Rhizobium Trial.

In the Cassava Systems Trial ICA-TUT and A-442 beans were harvested. Yields follow in kilos per hectare:

BEAN YIELD IN MONOCULTURE AND ASSOCIATIONS WITH CASSAVA.

	Monoculture check	R1	R2	R3	R4
ICA-TUT	1379	1445	1419	1541	1701
A-442	831	925	940	407	1101

The vigor of ICA-TBI and the cowpea varieties provided excellent weed control in the cassava associations. The bean variety A-442 failed to provide good weed control. Two extra hand weeding operations were required in the cassava-corn association and the cassava monoculture plots.

In the Rhizobium Inoculation Trial, plants were pulled and nodules counted. It was found that inoculated beans had a few small nodules and in the beans without inoculation, no nodules were formed. Nodules were larger and more numerous when soil from Pairumani was used as inoculum versus a commercial inoculant from the United States. Cowpeas, on the other hand, formed nodules without inoculant although slightly more nodules were found on inoculated plants. The size of bean nodules were smaller than B-B's while cowpea nodules were pea-sized.

II. ISSUES AND SOLUTIONS

Lack of vehicles and equipment remains a major problem for IBTA/Chapare, a full year after the beginning of the EI contract. However, five vehicles were received during the current quarter and BEAD has assured us that at least ten additional vehicles and a large shipment of extension equipment will arrive in October.

Political instability prevented IBTA/Chapare and EI from entering the Chapare during much of the quarter, including the month of September. We believe that this situation will soon be ameliorated under the new government.

Labor shortage on the experiment stations has slowed the pace of research and rehabilitation, and promises to pose an even greater problem in the coming months. The wage scale for laborers must be adjusted upward, and IBTA/Chapare should adopt labor saving practices (such as the use of machinery and herbicides) as much as possible.

Acquisition of new genetic material has not proceeded as rapidly as programmed. Evidently, monies are not readily available for travel and purchase. Satisfactory budgetary arrangements must be made for this important project component.

III. WORK PLANNED FOR NEXT QUARTER

TETA/Chapare will increase its training activities during the fourth quarter, 1985 to compensate for time lost during the third quarter because of strikes, road blocks, etc. Two complete cycles (for farmers, promoters and technicians) are planned.

Establishment of demonstration farms and community nurseries should continue at an accelerated pace. The level of interest on the part of Chapare farmers remains high despite the recent political problems.

On the research stations, additional experiments are planned:

Studies on the sun scald problems in pineapple

Multiplication of banana planting material using crown division and the scoring of corms.

Propagation of cacao clones by rooting of stem cuttings

Fertilization trials in banana and plantain

Methods of rehabilitating banana plantations

Effects of fertilizer on Desmodium yields

Fertilization and management of older banana plantations

Herbicide applications on corn

Cowpeas as a horticultural crop in the rainy season

Cowpeas as a cover crop in citrus

Corn variety - fertilizer interactions

Inoculation of beans and survival of Rhizobium under Chapare conditions.

Maintenance of TETA/Chapare nurseries will continue. Considerable plant material will be harvested for distribution to Chapare farmers or for use in communities. This will include:

Coffee	Macadamia
Peach Palm (Tembe)	Citrus
Pineapple	Bean-seed
Cardamon	Corn
Black Pepper	

Considerable effort will be spent on demonstration farms, nurseries and experment stations trying to stay ahead of the weeds during the rainy season.

IV. RECOMMENDATIONS

More emphasis should be given ~~by~~ USAID to logistical support of the project. This may, in fact, have been done previously. If so, we expect to see the results in the near future.

A more competitive wage rate for laborers should be established.

El and IETA/Chapare technical personnel should spend more of their working time in the Chapare as soon as the transportation problem is resolved.